



## FROM THE DESK OF THE DDSN MEDICAL CONSULTANT

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#### High Blood Pressure and Hypertension

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## HIGH BLOOD PRESSURE PART II

In our last Notes we looked at high blood pressure – What it is, why it happens, the complications it can cause, and that we can reduce the risk of these serious problems by controlling the blood pressure. This Note will look at ways that deal with hypertension. The discussion is for everyone – consumers and caregivers and we aim to Check It; Control It; Survive It.

### CHECK IT!

We mentioned that it is wise to check our blood pressure (BP) at least every two years. We can use the automated machines at pharmacies, etc. but it is best to have a BP check as part of a good physical exam and consultation. If the pressure is high, we need to check it a few times to learn its pattern and discuss with our health care provider how to manage it. This may require us to check our BP regularly to track progress and to motivate us. *Consumer Reports, June 2003* has a useful review of monitors. Use an arm cuff and review your results with your health professional.

### CONTROL IT!

Our aim is to reduce our risk of the complications of high blood pressure (heart or brain attacks, kidney and eye problems). Though we know that pressure above 140 systolic and/or above 90 diastolic are high risk, there is still discussion as to how low we aim for. Most reports say 120/80 is optimal. To get into this pressure range, we will get treatment for the basic medical problem if our hypertension is secondary to other causes. For most of the people with high blood pressure (95%), there is not a single reason for the rise in pressure and we tackle control by treating the risk factors and by using medication to change our body responses that cause the increase in vascular blood pressure.

## RISK FACTORS

We have mentioned we cannot change some factors that make it more likely that we develop hypertension – our family history, our age, or race. It is a challenge to change some of the other factors that would allow it to settle if they are removed. A good example is **smoking**. A smoker is **2 – 4 times more likely to have a stroke or heart attack** but this is reduced to normal after 2 – 3 years of not smoking. Much of this relates to a fall in blood pressure and changes in the constriction of blood vessels. Quitting smoking is hard but studies do show that a degree of self-determination together with group support and, sometimes, temporary medication can help.

Another area of challenge is **weight control and exercise**. Again, it is a chore, but worth it! Even a 10-pound weight loss or 30 minutes a day of walking have been proven to help if we are overweight. A diet high in vegetables, fruit, grains, and low fat dairy products with only a moderate/reduced alcohol intake is helpful. People respond variably, but many find reduced salt intake helpful to reduce blood pressure. Recent reports on low carbohydrate, high protein diets may mean that this pattern becomes accepted for some persons.

**Exercise** has effects on weight but also has a direct effect on blood pressure for many persons. It can be used as part of a **stress reduction** plan. When we are under stress our body develops a set of neurological, hormonal, renal, and vascular responses that often lead to high blood pressure and risk of complications. Exercise, meditation, yoga, and biofeedback are all techniques that can be used to reduce stress and its effects including hypertension and its risks. **Snoring** is another factor that we need to consider as a possible factor for hypertension and look at weight loss, sleep position, medications, etc., to help.

## MEDICATION

If high blood pressure does not respond to these changes, then medication may be needed. If used, it is likely to be needed for life and should not be stopped suddenly as this is a time when heart or brain (stroke) attacks are likely. The use of medication has been studied in lots of ways and there are several approaches that use different medication for different groups of persons.

The most common and inexpensive medications are **diuretics** (water pills) that get rid of sodium and fluid so that blood vessels do not hold as much fluid. Some people respond well to **beta blockers** which block the effect of adrenaline nerve impulses on heart and vessels and are particularly useful after a person has had a heart attack. The group of drugs that are **alpha-blockers** block another pathway of nerve impulses and result in blood vessels staying open better. Recent trials have shown them to be useful in a group of persons with hypertension.

**Questions** on high blood pressure that we need to discuss with our health professional:

- What are my BP numbers?
- What is my goal BP?
- Is my control good enough?
- What should my weight be?
- Are there suggestions for my diet?
- What physical activity is safe for me?
- What is the name of my medicines (both brand name and generic or drug names)?
- What side effects do I need to watch for?
- Does my medicine mean I need to avoid other medicines, OTC drugs, food, drink, supplements, or vitamins?
- What should I do if I forget a dose? Take it then? Skip a dose?

We should help our consumers use these questions and when we need them use them ourselves in order to check, control, and survive the challenge of high blood pressure.

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Angiotensin II is a hormone our body makes that causes blood vessels to constrict and blood pressure to go up. Its effect can be reduced if we stop it being made by using ***ACE inhibitors*** or block its binding to the vessels by using ***ATII Receptor Blockers (ARB's)***. Both these drug groups will lower blood pressure and the ***ACE*** inhibitors have other positive effects for diabetics. ***Calcium Channel Blockers*** are another group of medications that prevent vessels constricting by blocking the calcium entering muscle cells particularly in the heart and blood vessels.

As you can see, there are many choices and we need to choose with respect to the balance of ***effectiveness and side effects***. For African American persons diuretics and calcium channel blockers are usually more effective than ***ACE*** inhibitors, ***beta blockers***, and ***ARB's***. On all persons, side effects may mean we need to change dosage or medication. Common side effects include dizziness on standing after lying or sitting (this may need dosage or changes). Some people have low potassium levels on some diuretics. There may be problems with sleeping, dry mouth, drowsiness, constipation, depression, headaches, and some men have loss of the ability to have an erection (Viagra may be dangerous in this situation). When we use any medication we should check for its effects and for side effects and discuss these regularly with our health care professional.

## Remembering our medicine.

There are many tricks that we can use to remember any of our medicines (not just high blood pressure medicine).

1. Write it down for each day.
2. Use a color code for each drug or each dosage time.
3. Use a pillbox with slots for days and times.
4. Use a buddy system to remind each other.
5. Use a regular activity to be reminded; e.g., keep pills with your toothbrush or have a note on your shoes.
6. List refill times on the calendar.
7. If you use a computer, use it to help.
8. Do not stop medicine suddenly (particularly medicine for high blood pressure).
9. Discuss the pills with your health care provider and make a plan of doses that is as simple as possible.

